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ABSTRACT

Changing student demographics in higher education, especially increased numbers of older and/or working students, have inspired experimentation with a variety of class scheduling and degree program formats. This study investigated two such formats: (1) cohort programs (requiring students to take all or nearly all courses together toward a degree) and (2) intensive schedule classes (meeting in sessions of 4 hours or more) to determine whether they create group dynamics different from those associated with more traditional formats. The study analyzed data from 174 students and faculty in four graduate programs at three research universities (one each on the East and West coasts, and in the Rocky Mountain region). The group dynamics variables examined were group cohesiveness, group interaction, and instructional style. Findings indicated that cohort programs, either with or without intensive schedules, appeared to provide higher levels of cohesiveness and group interaction than more traditional programs. Intensive scheduling alone, however, did not influence group cohesiveness or interaction significantly. Contains 19 references. (Author/GLR)

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**Students in Cohort Programs and Intensive Schedule Classes:
Does Familiarity Breed Differences?**

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Abstract

Changing student demographics in higher education, especially increased numbers of older and/or working students, have inspired experimentation with a variety of class scheduling and degree program formats. The author of this paper recently investigated two such formats -- cohort programs (requiring students to take all or nearly all courses together toward a degree) and intensive schedule classes (meeting in sessions of four hours or more) -- to determine whether they create group dynamics different from those associated with more traditional formats.

In the study reported here, the dependent variables examined under the umbrella of "group dynamics" are group cohesiveness, group interaction and instructional style. Data were collected from students and faculty in four graduate programs at three research universities (one on the East coast, one on the West coast and one in the Rocky Mountain West). The findings indicate that cohort programs, either with or without intensive schedules, appear to experience higher levels of cohesiveness and group interaction than "traditional" programs. Intensive scheduling alone, however, does not influence group cohesiveness or interaction significantly. The instructional style variable could not be reliably assessed within the bounds of this study and may in fact operate independently of either program format or schedule.

Students in Cohort Programs and Intensive Schedule Classes:

Does Familiarity Breed Differences?

Introduction

Colleges and universities are being called upon to exercise remarkable creativity in developing a variety of program formats to meet the needs of both "traditional" full-time students and students (undergraduates and graduates) who seek degrees while employed part time or full time. In designing degree programs that address the shifting demographics of higher education, two frequent concerns arise: 1) scheduling class meeting times (e.g., weekdays vs. weekends and day vs. evening); and 2) formatting the program of courses (e.g. sequential vs. concurrent and longer/intensive vs. shorter class periods).

Two interesting approaches in the area of formatting and scheduling are gaining increasing attention, especially among colleges and universities in urban areas which attract substantial numbers of part time and commuter students. The first of these is the use of **student cohorts**. These are groups of learners who begin coursework together and remain together to complete a degree or certificate. Operationally, this is defined to include programs that require students to attend at least two-thirds of their classes with a stable group.

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The adoption of the cohort structure is, of course, not utterly new in higher education. It has been and remains a familiar pattern among law and medical students in their early program years. However, cohort groupings for other programs has lost some ground as student participation in program design and "shopping lists" of course offerings have gained favor as viable academic options. Thus, the cohort approach can be viewed as a change, if not exactly an innovation, in the formatting of courses in a variety of disciplines.

The second approach, found in numerous higher education degree programs, is the use of **intensive schedules**. Classes with intensive schedules are offered in periods of single weeks or on weekends, with individual sessions of four hours or longer. Often, this scheduling innovation is adopted to ease the time constraints that the traditional university schedule places on students who are employed part time or full time. By concentrating class time into a small number of days (even though the total number of clock hours is not reduced), programs make it easier for working students to schedule other responsibilities around their classroom activities.

Background

The author, who was involved in the design and development of a cohort program with intensive scheduling at the University of Utah, focused on intensive schedules and cohort groups as independent variables that might create group dynamics different from those experienced by students with traditional schedules and/or in "stranger" (non-cohort) groups. Insight into group dynamics (especially levels of group interaction and cohesiveness) can be valuable in terms of preparing

to instruct cohort and/or intensive-schedule groups, as well as making administrative decisions about whether such formatting is appropriate or desired. Additionally, some elements of group dynamics, particularly those related to student and student-instructor interaction, have implications for learning achievement (Centra and Rock, 1971; Latting and Raffoul, 1991; Pascarella, 1985).

Several elements of group dynamics delineate the dependent variables of the study. One is **group interaction**--the activities and behaviors of individuals and groups as they undertake various tasks and functions. Included in group interaction are the "intellective and communicative" behaviors that establish varying degrees of participation among group members (Steiner, 1972). The study reported here focused on the extent (rather than content) of interaction, both among students and between students and faculty. The extent of interaction between students and faculty is of particular interest in light of studies that have suggested this interaction--including interaction outside the classroom--can have a positive influence on certain types of academic achievement (Centra and Rock, 1971; Pascarella, 1985).

A second element of group dynamics that is particularly germane to this study is **group cohesiveness**--the sense of shared unity and solidarity that binds a group together (Ridgeway, 1983), resulting from the "total field of forces" that influence membership retention (Festinger, 1950). The current study examines cohesiveness related to tasks (particularly as evidenced by shared efforts to accomplish study assignments) and related to social interactions (especially through informal contact outside the classroom) to note possible differences in cohesiveness among cohort and

non-cohort groups, as well as those with intensive and traditional schedules. The potential contribution of cohesiveness in encouraging students to complete academic programs and in activating support among fellow students makes it important that we understand how and when it occurs. Obviously, it is easy to hypothesize that a degree cohort has a greater opportunity to establish cohesiveness than a group that stays together for only one course. However, it is important to test this as a prelude to questioning how that cohesiveness might relate to learning processes.

Among the studies that have attempted to determine effects of cohesiveness, convincing cases have been made for its positive influence on: amount and quality of group communication (Shaw, 1981), level of group member satisfaction, and degree to which group goals are attained (Ridgeway, 1983). Yet, at least some analysts have noted that cohesiveness can lead to "distracting interaction" that contributes to the "reduced likelihood of successful goal attainment" (Davis, 1969). A counter argument, however, insists that while social interactions unrelated to the tasks at hand may have a distracting effect, this is offset by increased task commitment noted in cohesive groups (Zaccaro and Lowe, 1988).

A third element examined in this study is **instructional style**. This element refers to how instructors approach classroom interaction, prompting the notion that cohort grouping and intensive scheduling may influence instructional issues such as lecture vs. discussion, use of exercises and case studies, and opportunities for free-flowing discussion among students. Balfour and Marini (1991) suggest that instructional styles are grounded in instructor assumptions about the character of

learners, and the nature of an appropriate relationship and may be viewed on a continuum from "Educational Theory X" to "Educational Theory Y." Educational Theory X assumes that the instructor is responsible for setting the agenda, making all curriculum decisions and controlling communication, which is overwhelmingly one-way. Educational Theory Y assumes a facilitative role for the instructor, with students sharing experiences and knowledge and participating in setting the direction of the class. Perhaps stranger groups meeting for shorter time periods do less than cohort or intensive scheduled groups to inspire and support these more creative, interactive instructional techniques.

While it is unclear that lecture (vs. discussion) instructional styles are any less effective in imparting subject knowledge (Dunkin and Barnes, 1985; Kulik and Kulik, 1979), there is some evidence that lecture is a less effective way to influence cognitive skills such as critical thinking and problem solving (Pascarella and Terenzini, 1991).

In summary, then, this study examines the effect of alternative class schedules and program formats on group interaction, group cohesiveness and instructional style. The hypotheses guiding the research can be stated as:

1. Cohort groupings and intensive schedules (individually and in combination) affect the extent of group interaction among classmates and among students and faculty in a positive (increasing) direction.
2. Cohort groupings and intensive schedules (individually and in combination) affect the level of group cohesiveness among classmates in a positive (increasing)

direction.

3. Cohort groupings and intensive schedules (individually and in combination) affect discussion/participation instructional style in a positive (increasing) direction.

Method

Sample

The two logistical arrangements of interest--cohorts and intensive schedules--often go hand in hand (classes for cohorts, with intensive scheduling), especially in "executive" degree programs developed for working adults. A four-fold design offered the opportunity to examine and compare programs that use various combinations of scheduling and formatting arrangements:

NON-COHORT NON-INTENSIVE	COHORT NON-INTENSIVE
NON-COHORT INTENSIVE	COHORT INTENSIVE

Four degree programs at three universities--one on the East coast, one on the West coast and one (with programs in two of the above cells) in the Rocky Mountain West--provided one university program that fit each cell. Each is a nationally accredited Master of Public Administration program.

Students in the non-cohort and non-intensive program (at the Rocky Mountain

West university) became the control group for the study. These students are admitted on a rolling basis in a Rocky Mountain university program, beginning at the start of any of the four quarters. All take nine core courses, but may take them in vastly different sequences. And they take seven area of concentration courses in other departments. Thus, students in this group schedule their classes on their own and complete the degree at their own pace. Their classes are constituted largely as "stranger groups."

The cohort, non-intensive cell represents a program at the East coast university where students begin together and take coursework together on campus for the first year. During their second year, they hold internship positions and gather back together for seminars and discussions of experiences.

Filling the non-cohort, intensive cell is a West coast university program in which intensive courses are offered on long weekends, with class sessions lasting all day. However, students begin the degree program any time of year and register for classes at their own pace and within their own sequencing preferences.

Finally, the Rocky Mountain West university also offers a program that falls in the cohort, intensive cell. This "executive" masters program serves adult students who have considerable professional experience. This program admits a cohort of students each fall who attend all their classes together over the course of two years. Classes take place for four hours late Friday afternoons and all day Saturday, two weekends each month throughout the two years.

Instrumentation

With cooperation of faculty members of the institutions and programs identified in the previous paragraphs, survey questionnaires were distributed to all students attending classes in each of the programs at the time of the study. A total of 174 were returned. In addition to eliciting information about the respondent's age, employment status, gender and progress toward degree completion, they included a set of scaled-response questions. After reading each question, the respondent was asked to choose one of the five following responses: not at all; to a very little extent; to some extent; to a considerable extent; to a great extent.

Items designed to measure group interaction, group cohesiveness and instructional style were based on those suggested by Taylor and Bowers (1972), appropriately modified for the educational setting. Clustered by variable they included:

Group interaction. Students were asked six questions concerning the extent to which they studied with other students, exchanged information with other students about important events and circumstances, discussed program requirements with other students, saw other students outside class, planned to remain in contact with other students after graduation and sensed trust and confidence in other students.

The group interaction scale was constructed additively from responses to these items, yielding a scale with a range from six to 30. The aggregate mean was 15.55 (N = 169).

Group cohesiveness. The last three items from the above were used as a subset to measure cohesiveness. This yielded a measure with a range from three to

15. The aggregate mean was 9.18 (N = 171).

Instructional style. To measure instructional style, four questions focused on the issue of lecture vs. discussion and the freedom to challenge others. They asked respondents about the extent to which they perceived classes as discussions (rather than lectures), challenged statements made by one another and perceived periods of free flowing discussion in the classroom.

These items yielded a scale with a range of four to 20. The aggregate mean was 13.46 (N = 172).

Reliability of the scale was assessed, yielding a Cronbach alpha reliability of .79. The reliability assessment by grouping yielded a Cronbach alpha reliability of .80 for the group interaction cluster and, again, .80 for the group cohesion cluster. No items were deleted to boost internal consistency.

However, weak reliability appeared in the case of instructional style (Cronbach alpha = .50).

Factor analysis was performed to assess the underlying construct validity of the group dynamics scale in terms of the three clusters described by the research design. The rotated factor matrix indicated that items anticipated as loading strongly on factors labeled "group interaction" and "group cohesiveness" did so, with only one exception in each cluster. However, this was not the case for "instructional style," where only two of the anticipated items loaded strongly on the same third factor.

The reliability and validity issues concerning "instructional style" lead to a number of possibilities, ranging from questions about wording of the questionnaire

to the notion that instructional style may be an area that is quite independent of program format and schedule. Given these possibilities, it was determined to report in detail only the results of the survey questionnaire as directed to group interaction and group cohesiveness. Following the survey portion, however, selected faculty were interviewed to further explore the issue of instructional style and to add the richness of qualitative inquiry. These interviews, however, were considered to yield more in the way of anecdotal information than hypothesis testing data.

Limitations

Several limitations to this study are important to note. First, the work is exploratory in nature, using a study sample that clearly is purposive; and results cannot be assumed to be generalizable to student classroom groups overall. Additionally, the students surveyed in the four programs may have experienced very different program elements that created their own confounding variables--such as age/maturity of the program, course sequencing, courses being taken at time of survey, etc. Thus, findings should be viewed as very tentative first steps toward exploring the influence of course scheduling and program formatting.

Findings

Group Interaction

The descriptive statistics of responses related to group interaction indicated the greatest extent of interaction took place in the two cohort groups, with lesser extent in the two non-cohort groups. Intensive vs. non-intensive scheduling did not

demonstrate such a clear relationship to group interaction, however. The non-cohort/non-intensive group reported the least interaction ($X = 14.70$, $SD = 3.47$), while data from the non-cohort/intensive group ($X = 18.28$, $SD = 3.46$) and from the cohort/intensive group ($X = 18.35$, $SD = 3.54$) indicated stronger interaction. The strongest interaction, however, was reported by the cohort, non-intensive group ($X = 22.19$, $SD = 4.13$) at the East coast university.

Two-way analysis of variance tested for the contribution of schedule and format. Table 1 presents the results.

Table 1
Analysis of Variance: Group Interaction by
Program Format and Class Schedule

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Main Effects	401.031	2	200.515	15.084	.000
Schedule	4.131	1	4.131	.311	.587
Format	395.988	1	395.998	29.790	.000
2-way Interactions	413.600	1	413.600	31.115	.000
Format by Schedule	413.600	1	413.600	31.115	.000
Explained	814.630	3	271.543	20.428	.000
Residual	1661.602	125	13.293		
Total	2476.233	128	19.346		

Taken together, format and schedule appeared to have an effect on group interaction, as it is reported by students in the programs. Taking each independent variable individually, only format (cohort, non-cohort) was significant. This finding did not seem surprising in relation to the descriptive statistics.

While it appears that intensive scheduling may not influence group interaction as hypothesized, it is also important to note the limitations described earlier considering other possible variables within the group of students examined. For example, the cohort/non-intensive group studied (East coast university) had more pre-service students than the others. This may have created more free time outside class for interaction. In addition, the fact that their classes were conducted with traditional scheduling may have made it more possible for them to see more of each other on campus between classes than would students with intensive class schedules.

Group Cohesiveness

Descriptive measurements of responses related to cohesiveness were similar to those that considered group interaction. Again, the non-cohort/non-intensive group reported far less cohesiveness ($X=7.04$, $SD=1.56$) than the others. This was followed by the non-cohort group with an intensive schedule ($X=8.74$, $SD=1.88$). The two cohort groups reported the greatest extents of cohesiveness, with the cohort/intensive schedule group ($X=9.39$, $SD=1.78$) at a lower level than the traditional schedule cohort group ($X=11.61$, $SD=2.33$).

As Table 2 indicates, there was a significant interaction effect, showing that taken together, both program format (cohort/non-cohort) and class schedule (intensive/non-intensive) had an effect. However, taken separately, only program format appeared related to group cohesiveness. Again, the heightened cohesiveness for the cohort/non-intensive group may relate to elements of the group, and differences among the groups, that were not accounted for in this study.

Table 2

Analysis of Variance: Group Cohesiveness by
Program Format and Class Schedule

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Main Effects	202.183	2	101.092	27.350	.000
Schedule	.009	1	.009	.002	.961
Format	192.844	1	192.844	52.174	.000
2-way Interactions	116.004	1	116.004	31.385	.000
Format by Schedule	116.004	1	116.004	31.385	.000
Explained	318.187	3	106.062	28.695	.000
Residual	469.416	127	3.696		
Total	787.603	130	6.058		

When the group interaction and group cohesiveness data were analyzed by gender and age they yielded only small differences in most cases. The sole exception was the 20 to 29 age group. Respondents in that group ($N=73$) reported substantially greater extents of group interaction ($X=20.26$, $SD=4.56$) and cohesiveness ($X=10.11$, $SD=2.7$) than did respondents in the ranges from 30 and over ($N=96$) where lesser extents of both group interaction ($X=17.51$, $SD=3.56$) and of cohesiveness ($X=8.66$, $SD=1.88$) were reported in the aggregate. These differences indicate some consistence with earlier findings by Wolfgang and Dowling (1981) concerning motivational factors in higher education for adult and traditional (age 18-22) students. Traditional students rated "social relationships" as significantly more important in motivation to attend than did older students, who viewed "cognitive interest" as a significantly higher motivator than did the younger students. It is possible that group interaction and cohesiveness might be experienced to a

greater extent by students for whom "social relationships" are important.

Instructional Style

There were two reasons to anticipate differences between cohort and non-cohort groups in the predominant instructional style adopted by instructors. First, the cohort classes were typically smaller (or, at least, the size is more easily controlled and, therefore, they are of more uniform size). That, alone, might result in a more "open" classroom style. Second, faculty who sensed interaction and cohesiveness among group members might be inclined to take advantage of this in their teaching by using styles that encourage open discussion.

With regard to intensive versus non-intensive groups, the anticipated effect, if any, was in the direction of more participative instruction in the intensive groups. It was considered most likely that faculty would need to plan discussions and interactive exercises when classes met for extended time periods.

Responses indicated that the major effect was the lower level of participatory instruction found in classes that were neither cohort nor intensive, as anticipated. The three other combinations reported increased participatory instruction, with little statistical difference among them. However, as mentioned earlier in this paper, reliability and validity tested as weak concerning the instructional style scale, giving rise to the possibility that instructional style may operate independently of format and schedule.

Faculty Perceptions

As a further check concerning group interaction and cohesiveness, and to better explore the instructional style issue, interviews were conducted among faculty who had taught in both cohort and non-cohort and intensive and non-intensive groups. Again, therefore, sampling was purposive. The 13 interviewees had taught in public administration, business administration and educational administration programs.

A very few, open-ended questions were asked in the interviews to allow for free-flowing discussion to the greatest extent possible. Questions asked in each interview were:

-- What, if anything, have you done differently because you knew the members of your class comprised a group of students known to each other, versus a stranger group? Because scheduling was intensive (4 hours or more at a time) versus shorter time periods?

-- Have you noticed any behaviors among members of a cohort and/or an intensive scheduled group that seem to indicate interpersonal (social) or task (work/learning related) cohesion? If so, what are they?

-- Have you noticed any interaction among students and/or between students and yourself that is different among members of a cohort and/or an intensive scheduled group than a traditional program group? If so, what?

-- In what ways do you feel the cohort format or intensive schedules might facilitate or hinder teaching and learning?

-- Have you observed any learning outcomes that you feel might be different when you have taught the same courses to cohort and non-cohort groups?

Responses were summarized on a simple checklist matrix to note clustering of mentions and to organize them in relation to variables. While no quantitative analysis of the comments was attempted, responses did provide anecdotal insight into the effect of intensive schedules and cohort formats as faculty members see it. A great deal of interesting information also was offered that was not related to either schedule or format, but suggested future research directions.

Most interviewees emphasized that their responses were based only on impressions and opinions. A number noted that since their cohort teaching experiences also entailed intensive classes, it was difficult to separate the effects of program format from those of class schedule.

Instructional style. Interview responses concerning this variable were perhaps more enlightening than were the questionnaire responses--perhaps because faculty were in the best position to assess instructional differences in the varying schedule and format arrangements. All the faculty interviewed mentioned at least some change in instructional methods for cohort/intensive groups, typically to incorporate segments that require classroom interaction. Several mentioned they do this because they believe they can expect a more discussion from a group of students known to each other.

Much of the discussion of instructional style related more to instructional philosophy and ideas, rather than in-classroom interactions. Slightly over half the respondents mentioned instructional issues regarding changes in materials, texts and preparation activities when teaching cohort/intensive classes. This was summarized by one as simply "trying harder." That interviewee noted, "The vulnerability you feel as the outside member of a group that is already formed and is likely to act together makes you go that extra mile." Another echoed, "There's a fair amount of intimidation for the instructor when you teach a group that knows each others' views and work experiences. You want to make use of that in class, not skirt it, and that means you really have to be at your best."

Updated materials, new class exercises and more time spent preparing presentations were specific items noted by faculty as different approaches for cohorts.

Several respondents mentioned that the cohort situation led them to better "tailor" their material to individual interests because they knew ahead of time who will be in the class. Such tailoring especially influences choices of examples, hand-out readings, case studies and group exercises. One constitutional law instructor gave a cohort a set of hypothetical cases along with their first reading assignment, including class members' names worked into each case. As an interviewee noted, "There is an enormous advantage in terms of targeting lessons right from the start and addressing the interests and needs of all the students. This is not only possible, but essential, because a cohort group will be

pretty quick to rebuke you if you cover things that don't seem to meet their needs."

Similarly, the fact that members of a cohort start with the same academic experiences at any given point was seen as a positive influence on teaching by the three interviewees who mentioned it. One commented:

"You know exactly what classes they've already had toward their degree, and you can build on that if you do a bit of research with your fellow faculty members. You don't have to try to find a common denominator that reaches both the student in his/her first program course and the student in his/her ninth course."

The preparation and "extra mile" work for cohorts is viewed as extra work, but with substantial payoff for students. One interviewee summarized:

"As professors, we typically get into the mode of just teaching our own thing, so we don't find out what is going on with the group, their backgrounds, their work environments. And in many cases, we wouldn't do anything differently if we did find out. But students in a cohort with their peer support and willingness to speak out, force us to adapt our teaching to their realities."

Group interaction. Most faculty noted some differences in the in-class behavior of cohort/intensive versus traditional students, particularly in terms of group discussions. For example, "During cohort classes there is a spirit of willingness to take part and to participate that seems to facilitate teaching and learning." Other faculty observed more student follow-up on points made by other students and more attempts to be certain that they understood one another's views. However, at least one instructor noted in an executive program cohort, which attracts a considerable number of senior administrators, there is

initial "deference by the group to those within it who have the most experience and highest level of professional position." This individual continued:

"You can easily see attribution of authority and experience, so the instructor has to act somewhat as a gate keeper to make sure everyone is included. This would not happen in a stranger group where everyone assumes more equality and may not even realize who are the most experienced class members."

Group cohesiveness. Faculty felt they observed greater levels of both task and social cohesiveness among cohort students than among non-cohort students and noted that this tendency may be encouraged by "intensive" class format and block course scheduling as well. Task cohesiveness, as a subset of group interaction, was particularly noted in terms of the formation of study groups. These were seen by faculty as having both favorable and unfavorable consequences. Typically, the study group members divide reading assignments or study questions and then report to one another on their portions. One respondent commented:

"This has been a really well organized effort among the cohort students. They distribute summary sheets of the reading so everyone can get a semblance of what is going on in class without doing all the reading. So naturally you wonder if they are really getting all the learning they should be getting. But, in the end, I think most of them use the study sheets as a temporary or supplemental measure, until they catch up on the reading."

Another maintained, "It's a tough call. Do you applaud the notion of the close interaction established by the study groups, or do you say, 'Look, this is school; you need to be studying all of this, not splitting it up.?' " Faculty

members saw considerable social supportiveness among students. They identified this as a factor encouraging students to remain in a program and complete a degree, although they could not identify any learning outcomes from the supportiveness. Typical comments were:

"They want each other to succeed. One student told me, 'Nobody flunks out. If someone gets into trouble, we'll just help them out until they make it.'"

"One student called the office to say she was going to drop out of the program—just didn't have enough time. But then two other students talked to her at length and convinced her to stay and finish."

"They help each other figure out how to get their personal and professional acts together so they are freed to learn."

"One student's wife died, leaving him with their seven kids. His classmates carried him for the next four months—literally did his assignments for him."

Several faculty members did conjecture that this cohesiveness and mutual support had benefits beyond keeping students in the program and might extend to producing favorable effects on learning. As one summarized:

"The cohort and intensive class situation amounts to one more layer of motivation. The students in the group work hard and prepare thoroughly not just with their degrees or grades in mind, but also because they have a group of peers who know how one another are doing. There's some sense of healthy competition, but they also just don't want to let one another down."

Discussion

Previous research suggests that at least some positive influence on student achievement can occur from group interaction (Centra and Rock, 1971; Pascarella, 1985). Others have noted group cohesiveness as a positive factor in quality of group communication (Shaw, 1981) and group goal attainment (Ridgeway, 1983). Both group interaction and cohesiveness, then, could be viewed as potentially making some positive contribution to the learning process, if we can agree to a connection similar to that made by Ernest Boyer (1990) in asserting:

"Educator Parker Palmer strikes precisely the right note when he says knowing and learning are communal acts. With this vision, great teachers create a common ground of intellectual commitment. They stimulate active, not passive, learning and encourage students to be critical, creative thinkers with the capacity to go on learning after their college days are over" (p. 24).

The study reported here indicates that if there are any advantages in group cohesiveness and group interaction, they may be able to accrue from a cohort structure (less likely to accrue from intensive scheduling)--at least for the groups studied. In the analysis of the student surveys, on all three of the dependent variables (group interaction, group cohesiveness and instructional style), the cohort structure has been more influential than has the traditional (non-cohort, non-intensive) approach.

The faculty interview portion of the study did not allow for differentiation of the effect of class format and schedule. Certainly, most faculty comments indicate that for cohorts in particular, instruction changes in the direction of more

preparation, more recognition of individual student needs and more awareness of student reactions to instruction. This is viewed as likely to have a favorable influence on student learning and development. However, faculty comments also pointed toward areas of possible disadvantages to watch for in cohort programs—unfavorable effects which could detract from or even cancel out the favorable effects of group process and cohesion.

Noteworthy also, although not the subject of this study, is the potential for the cohort structure to reap efficiency gains. Analysts examining the economics of higher education pose the possibility of economies of certainty, where classes with known and constant members of students (as long as they are not very small) are more efficient than programs which allow student choice and may produce classes ranging from under 10 to over 40 students (Massey and Zemsky, 1990). Lock-step scheduling in a two-year graduate cohort program means each course is taught every two years, with all cohort members in attendance. Most two-year programs with student choice in scheduling find they need to offer each course at least once a year, and that the actual numbers of students who will enroll in a given term is difficult to predict.

In sum, aware administrators and faculty may capitalize on some gains for students and institutions through cohort formats in particular, and possibly when they are used in conjunction with intensive scheduling. However, there is more work to be done in further studies that conquer the limitations posed here by possible

differences between groups, in making connections between group dynamics and educational outcomes and in describing possible unfavorable effects that group cohesiveness and interaction also might produce. This study should be viewed as a starting point in considering the consequences of program format and scheduling decisions beyond logistical or tactical considerations.

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